

**SIEMENS**

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to Bell, Boyd & Lloyd LLC  
our reference 1996P01499 US01

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-7. (Cancelled)

8. (Previously amended) A method as claimed in claim 24, wherein the first scheduler employs a weighted fair queueing scheduling algorithm.

9. (Previously amended) A method as claimed in claim 24, further comprising the step of:  
providing an input device which contains a table which includes current storage levels of  
buffer stores for storing the data packets.

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Previously amended) A method as claimed in claim 24, further comprising the step of  
entering the queue identifier while the connection is being set up.

14. (Previously amended) A method as claimed in claim 25, further comprising the step of  
entering the queue identifier while the connection is being set up.

15. (Previously amended) A method as claimed in claim 24, wherein the data packets are  
ATM cells.

16. (Previously amended) A method as claimed in claim 25, wherein the data packets are  
ATM cells.

17. (Previously amended) A method as claimed in claim 24, further comprising the step of  
controlling the operation of the first scheduler dependent on a result of the second scheduler.

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18. (Previously amended) A method for transmission of data packets of a connection utilizing a system having a first scheduler for scheduling a lower transmission rate for the data packets and a second scheduler for scheduling an upper transmission rate for the data packets, comprising the steps of:

deciding whether to limit a rate for a particular connection;

supplying, in response to the decision not to limit the rate of the particular connection, a lower limit control signal to the first scheduler such that the lower limit control signal bypasses the second scheduler;

limiting, by action of the first scheduler, the lower transmission rate of the particular connection in response to the lower limit control signal when it is decided not to limit the rate of the particular connection;

supplying, in response to the decision to limit cell rate for the particular connection, an upper limit control signal to the second scheduler;

limiting, by action of the second scheduler, the upper transmission rate of the particular connection in response to the upper limit control signal;

generating, by the second scheduler, an initial planning control signal that in part represents a scheduling of the second scheduler; and

setting the lower transmission rate of the particular connection by the first scheduler in response to the initial planning control signal generated by the second scheduler.

19. (Previously amended) The method of claim 24, further comprising the step of feeding back a result of a transmitted data packet to assist in the determination whether the transmission rate of a later data packet should be limited.

20. (Previously amended) The method of claim 24, further comprising the step of storing a table indicating which connections require limiting during transmission.

21. (Currently amended) An apparatus for transmission of data packets of a connection, comprising:

a first scheduler that limits a lower transmission rate for the data packets when it is desired not to limit an upper transmission rate of the data packets; and

a second scheduler that limits an the upper transmission rate for the data packets when it is desired to limit the upper transmission rate of the data packets, generates an initial planning control signal that takes into account scheduling in the second scheduler and supplies the first

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*Cont* scheduler with the initial planning control signal, wherein the first scheduler limits the lower transmission rate in accordance with the initial planning control signal when the transmission rate of the data packets are to be limited.

22. (Previously amended) The apparatus of claim 21, further comprising an output device that feeds back a result of transmitting the data packets indicative of an actual output rate.

23. (Previously amended) The apparatus of claim 22, further comprising an input device for comparing the feed back result to data and adjusting operation of the first scheduler and the second scheduler to account for the actual output rate of the data packets.

24. (Currently Amended) A method for optimizing the utilization of connecting sections in systems in which information is transmitted in data packets, the method comprising the steps of:  
providing a first scheduler for scheduling transmission of the data packets by which corresponding connection parameters, which are representative of lower transmission rates of the data packets, are guaranteed during a transmission process;

*AAAA* providing a queue identifier which is stored in a packet header, said queue identifier including information related to a transmission rate of an associated data packet;

providing a second scheduler for scheduling transmission of the data packets to precede the first scheduler depending on the queue identifier, that is when the information indicates that the transmission rate is to be limited at the <sup>or</sup> upper rate the second scheduler schedules the cell rate for the data packets before the first scheduler, and when the information indicates that the transmission rate is not to be limited at the upper rate the first scheduler schedules the cell rate for the data packets before the second scheduler, wherein the data packets corresponding connection parameters which are representative of upper transmission rates of the data packets are limited during the transmission process; and

*AAAA* providing an input device which contains a table which includes current storage levels of buffer stores for storing the data packets and generates a control signal based on the data packet identifier and the current storage levels for controlling the first and second schedulers.

*generating*  
25. (Previously Amended) A method for optimizing the utilization of connecting sections in systems in which information is transmitted in data packets, the method [further comprising the steps of] comprising the steps of:

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providing a first scheduler for scheduling transmission of the data packets by which corresponding connection parameters, which are representative of lower transmission rates of the data packets, are guaranteed during a transmission process;

providing a queue identifier which is stored in a packet header, said queue identifier including information related to a transmission rate of an associated data packet;

providing a second scheduler for scheduling transmission of the data packets to precede the first scheduler (depending on the queue identifier) wherein corresponding connection parameters which are representative of upper transmission rates of the data packets are limited during the transmission process; *BYPASS?*

providing an input device which contains a table which includes current storage levels of buffer stores for storing the data packets;

feeding back a result of reading out the data packets from at least one of the buffer stores representative of the current storage levels of the buffer stores to the input device; and

influencing the operation of the second scheduler based on the result fed back to the input device.